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A model of psychological adaptation in Peace Support Operations: An overview

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Abstract

Canada has a long and distinguished history of peacekeeping service, yet research from within the Canadian Forces indicates that the psychological and interpersonal toll of these missions on CF personnel can be quite high [e.g., 1; 2; 3; 4; 5]. The Peace Support Operations Adaptation Model (PSOAM), introduced here, details the adaptation process beginning during predeployment, continuing through the deployment and post-deployment phases. The model adds to existing conceptual models of deployment stress by incorporating individual, group, and organizational level variables at each stage of the deployment cycle, factors assumed integral to short and long term adaptation. Of particular interest are the influence of predeployment factors upon individuals' coping efforts and resiliency. The effects of *personality factors* (e.g., hardiness, self-efficacy, mastery, dispositional optimism, internal locus of control) and *predeployment expectations* (e.g. deployment goals, beliefs concerning upcoming deployment) on *predeployment motivational factors* (e.g., level of motivation, perceptions of preparedness, perceptions of risk, level of intrapersonal conflict) are of specific concern. These predeployment factors, together with *self-assessments of coping resources* during deployment are assumed to directly affect the quality of adaptation and serve as the primary influences on individuals' resiliency to the stress associated with peace support operations. Our focus on the precursors of the adaptation process also allows us to contribute to efforts to recommend modifications to training content and delivery that may avert later maladaptive responses. Moreover, this focus allows for the specification of individual difference variables of relevance to personnel selection in instances where training cannot completely ameliorate the effects of negative deployment events.

Résumé

Le Canada a une longue et impressionnante feuille de route en matière de service de maintien de la paix. Pourtant, la recherche menée au sein des Forces canadiennes indique que le prix psychologique et interpersonnel que le personnel doit payer pour ces missions est très élevé (voir, par exemple, [1; 2; 3; 4; 5]. Le modèle d'adaptation aux opérations de paix (MAOP) présenté ici décrit en détail le processus d'adaptation qui débute avant le déploiement et qui se poursuit pendant et après celui-ci. Ce modèle est différent des modèles conceptuels qui existent déjà au sens où on y incorpore, à chaque étape du cycle de déploiement, des variables de niveau individuel, collectif et organisationnel, qui définissent l'adaptation à court et à long terme. Ce qui est particulièrement intéressant, c'est qu'on y analyse aussi les effets des attentes avant le déploiement (par exemple, les buts du déploiement et l'opinion que l'on se forge à son sujet) et les effets des facteurs associés à la personnalité (par exemple, la vigueur, l'auto-efficacité, la maîtrise, l'optimisme, le locus de contrôle interne) sur le degré de préparation, la perception du risque et le niveau de conflit intrapersonnel. Ces facteurs de pré-déploiement, conjugués à la façon dont chacun évalue sa capacité de se tirer d'affaire durant le déploiement, influent directement, croit-on, sur la qualité de l'adaptation et essentiellement sur la résistance au stress associé aux opérations de paix. Par l'attention que nous accordons aux éléments précurseurs du processus d'adaptation, nous pouvons nous aussi formuler des recommandations quant aux modifications devant être apportées au contenu et à

la prestation de la formation donnée aux gardiens de la paix, et qui pourraient permettre de prévenir les réactions négatives de ces derniers lors des déploiements. En outre, cette approche permet de définir des variables relatives aux différences individuelles, qui peuvent s'avérer utiles dans le choix du personnel lorsque la formation ne suffit pas à évacuer complètement les effets négatifs du déploiement.

Executive summary

The aim of the Peace Support Adaptation Model (PSOAM) is to provide a conceptual framework through which to identify the multiple demands and rewards associated with peace support missions and to understand their effects upon the subsequent adaptation of military personnel. Adaptation in this context can be broadly defined as psychological, resiliency, interpersonal agency and occupational productivity. Moreover, adaptation means achieving a quality of life that equals or exceeds that which existed before the peace support operation.

The PSOAM describes three general classes of variables, individual, group, and organizational level factors assumed to operate at all deployment phases. Note that the specific selection of variables is not intended to be exhaustive. Rather, we selected a range of variables discussed in previous literature, using both military and non-military studies, in order to illustrate how the model can provide a framework for testing the impact that peace support operations have on individuals and the factors that relate to adaptation among peacekeepers. We include as measures of adaptation a wide range of psychological and social outcomes that have been used in previous research. Although generic enough to be applicable to any nation's armed forces, the PSOAM's formulation draws substantially on the Canadian peacekeeping experience

Most prior theoretical models of deployment stress focus on deployment experiences and post-deployment adaptation. Relatively few models take a longitudinal approach, linking deployment stressors to postdeployment outcomes. As well, there is almost no literature examining the effects of predeployment variables on deployment and post-deployment outcomes. The PSOAM aims to encompass the predeployment, deployment and post-deployment phases of peace support operations.

The predeployment phase covers a variety of factors in place prior to the mission that may affect adaptation to the stresses encountered on a peace support mission. Examples of predeployment individual-level factors include demographic factors, an individual's expectations for the upcoming deployment and dispositional factors. Social level predeployment factors include aspects of an individual's social and interpersonal context including perceptions of support from family, friends and the public. Organizational level factors include the Canadian government and Department of National Defence policies regarding rules of engagement, equipment and logistics restrictions and limitations. Other organizational level factors include "vertical cohesion" (leadership) and "horizontal cohesion" (esprit de corps) [6] as well as the amount and type of mission-specific, peace support training that military personnel receive.

We hypothesize that predeployment demographics, expectations, predispositions, social/interpersonal factors, and organizational structures influence people's deployment goals, as well as their self-assessments of their degree of preparedness, personal risk, and motivation regarding the mission. We refer to this class of variables as Enabling or Impedance Factors. We hypothesize that it is these Enabling or Impedance factors that serve to bolster or attenuate an individual's personal resources thus playing a principal role in

subsequent assessments of an employment experience as stressful and in short- and long-term adjustment and adaptation.

The PSOAM also delineates the factors that may be encountered on a deployment. Again, people's subjective assessments of their performance, including their appraisals of their capacity to cope with their experiences, will be a key factor in their adaptation. As well, in order to understand a person's adaptation to their peace support operation, it is important to assess a broad spectrum of deployment events that may be perceived of as major events, chronic stressors, and daily hassles. Here again, elements associated more specifically with organizational-level factors will be important to elucidate, such as perceptions of positive and negative leadership behaviors and the chain of command, group cohesion, role ambiguity, perceived adequacy of predeployment training, and ambiguous rules of engagement.

The third phase of the PSOAM includes variables that can affect adaptation at the post-deployment phase, as well as examples of measures typically used to measure deployment adaptational outcomes. Similar to the variables described earlier in the model, we divide these outcomes into personal, interpersonal, and organizational outcomes. Personal outcomes are any positive or negative outcome or consequence of relevance to the individual as a result of the deployment experience. Examples of positive personal level outcomes include a sense of professional and personal development, increased self-discipline, resilience, and self-esteem. Instances of negative personal outcomes include depression, anxiety, increased somatic complaints, antisocial behavior, and hostility and negative lifestyle changes. Social or interpersonal outcomes include changes in the nature of the relationship the individual has with others as a result of his or her peacekeeping experience, including changes to relationships with family, friends, and coworkers who were deployed and not deployed with the individual. Individuals may also perceive both the military and the Canadian public differently as a result of their peace support operation. Finally, there are organizational level outcomes that are important to tap in understanding adaptation to peace support operations such as intended/actual turnover, level of unit cohesion, time off (e.g., sick days), job satisfaction, job performance ratings, perceptions of organizational commitment and organizational trust

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Sommaire

Le modèle d'adaptation aux opérations de paix (MAOP) a pour but d'offrir un cadre conceptuel permettant de cerner les multiples exigences et gratifications associées aux missions de maintien de la paix et de comprendre les effets de celles-ci sur l'adaptation subséquente du personnel militaire. L'adaptation, dans ce contexte, peut être globalement assimilée à la capacité de récupération psychologique, aux relations interpersonnelles et à la productivité au travail. En outre, on entend par adaptation l'atteinte d'une qualité de vie égale ou supérieure à celle qui existait avant l'opération de paix.

Le MAOP définit trois grandes classes de variables – des facteurs de niveau individuel, collectif et organisationnel – censées être à l'œuvre à toutes les étapes du déploiement. À remarquer que ce choix particulier de variables n'a aucune prétention d'exhaustivité. Nous avons plutôt choisi un ensemble de variables retenues dans des études antérieures, de type militaire et non militaire, afin d'illustrer le rôle que peut jouer le modèle pour l'évaluation de l'incidence des opérations de paix sur les personnes et l'évaluation des facteurs d'adaptation parmi les gardiens de la paix. Nous incluons dans les mesures de l'adaptation un large éventail de comportements psychologiques et sociaux utilisés au cours des recherches antérieures. Bien que le modèle soit suffisamment générique pour s'appliquer aux forces armées de n'importe quel pays, la formulation du MAOP s'inspire essentiellement des missions canadiennes de maintien de la paix.

La plupart des modèles théoriques antérieurs analysant le stress lié au déploiement ont mis l'accent sur les expériences vécues pendant le déploiement et sur l'adaptation du personnel après coup. Relativement peu de modèles adoptent une approche longitudinale et font le lien entre les facteurs de stress liés au déploiement et les comportements qui en résultent. En outre, pratiquement personne n'a tenté de cerner les effets que peuvent avoir les variables pré-déploiement sur les réactions au moment du déploiement et après celui-ci. Le MAOP recouvre quant à lui les trois étapes de déploiement – « avant, pendant et après » les opérations de paix.

Dans l'étape qui précède le déploiement, on tient compte de toute une gamme de facteurs présents avant la mission susceptibles d'influer sur l'adaptation aux pressions que comporte toute mission de maintien de la paix. Sur le plan individuel, par exemple, on doit tenir compte de facteurs démographiques, des attentes de la personne par rapport au déploiement et de facteurs liés à sa disposition d'esprit. Sur le plan social, on doit se pencher sur les aspects du contexte social et interpersonnel de la personne, y compris sa perception du soutien qu'elle peut attendre de sa famille, de ses amis et du public. Sur le plan organisationnel, on tiendra compte des politiques du gouvernement canadien et du ministère de la Défense nationale régissant les règles de l'engagement, ainsi que des restrictions et des limites de l'équipement et de la logistique. Il existe aussi d'autres facteurs de niveau organisationnel comme la « cohésion verticale » (le leadership) et la « cohésion horizontale » (l'esprit de corps) [6] ainsi que la quantité et le genre de formation que reçoit le personnel militaire au sujet de la mission particulière à laquelle il est affecté.

Nous posons comme hypothèse que les aspects du pré-déploiement liés à la démographie, aux attentes, aux prédispositions, aux facteurs sociaux et interpersonnels et aux structures

organisationnelles influent sur les buts que se fixent les gens par rapport au déploiement ainsi que sur la façon dont ils évaluent leur niveau de préparation, les risques personnels qu'ils courent et leur motivation par rapport à la mission. Nous appelons ces variables des facteurs favorables, ou nuisibles. Nous supposons que ces facteurs favorables ou nuisibles ont pour effet de renforcer ou d'amoindrir les ressources personnelles et jouent donc un rôle déterminant dans l'évaluation faite par la suite quant au degré de stress vécu pendant cette expérience et dans l'adaptation à court et à long terme de la personne.

Le MAOP définit également les facteurs qui peuvent être présents au moment du déploiement. Ici encore, l'évaluation subjective des gens à propos de leur rendement, y compris la façon dont ils perçoivent leur capacité d'affronter les situations qu'ils ont à vivre, joue un rôle clé dans leur adaptation. En outre, pour bien comprendre la facilité d'adaptation d'une personne à la mission de maintien de la paix à laquelle elle participe, il importe d'évaluer un large assortiment d'événements connexes qui peuvent être perçus comme des événements marquants, des facteurs de stress chroniques ou des ennuis quotidiens. Ici encore, il sera important de cerner les facteurs plus précisément liés au plan organisationnel, tels que la perception des comportements de leadership positifs et négatifs ainsi que la chaîne de commandement, la cohésion du groupe, l'ambiguïté des rôles, la confiance en la formation offerte avant le déploiement et l'ambiguïté des règles d'engagement.

La troisième étape du MAOP comprend des variables qui peuvent influer sur l'adaptation post-déploiement ainsi que des exemples de mesures habituellement utilisées pour évaluer les résultats du déploiement sur le plan de l'adaptation. Tout comme pour les variables décrites plus tôt dans ce modèle, nous divisons les résultats en trois niveaux : personnel, interpersonnel et organisationnel. On entend par résultat personnel toute conséquence positive ou négative du déploiement pour la personne. Par exemple, le sentiment de s'être perfectionnée sur le plan professionnel ou personnel, d'avoir acquis une plus grande discipline, d'avoir accru sa capacité de récupération et son estime de soi compteraient parmi les résultats personnels positifs. Par contre, du côté négatif, on pourrait citer la dépression, l'anxiété, l'augmentation de problèmes d'ordre somatique, un comportement antisocial, l'hostilité et des changements négatifs dans le mode de vie. Les résultats sur le plan social ou interpersonnel seraient liés aux changements qui se sont produits dans la nature des relations que la personne entretient avec autrui par suite de son expérience de maintien de la paix, y compris les changements dans ses relations avec sa famille, ses amis et ses coéquipiers, membres ou non de la mission. Les personnes peuvent également percevoir les militaires et le public canadien différemment par suite de leur mission de paix. Enfin, pour bien comprendre l'adaptation aux opérations de paix, il est important de tenir compte de certains résultats sur le plan organisationnel comme le roulement du personnel, prévu ou réel, le degré de cohésion de l'unité, les absences (comme les congés de maladie), la satisfaction au travail, les cotes de rendement au travail et la perception de l'engagement envers l'organisation et de la confiance qu'on lui accorde.

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Introduction

Canada has had a long and distinguished history of peacekeeping service [5]. At present, Canada is a member of peace support operations in 21 countries, including the Sinai and Golan Heights, Haiti, Cambodia, Bosnia, and Kosovo. Beyond the sheer number of missions in which Canada participates, the very nature of peace support operations has changed substantially over the past decade. Peace support operations still include traditional peacekeeping and military observer missions, but increasingly encompass peace-enforcing, and peace-making mandates [7; 8]. Each mission type can entail ambiguous and frustrating rules of engagement (ROEs) [9]. Moreover, in theatres of operations such as Bosnia, Rwanda and most recently Kosovo, Canadian troops have been introduced into civil wars, have witnessed the large-scale massacre of civilians, and have themselves been targets of violence [9; 10; 4; 12; 13].

Although Canadian involvement in peace support operations has been perceived of as being largely successful and as a source of pride for the Canadian military and public alike, research from within the Canadian Forces indicates that these missions take a toll on Canadian military personnel [1; 2; 3; 5; 4; 14] Nor is Canada the only country that is concerned with the impact of peace support missions on their military personnel. Many countries have begun to dedicate research resources toward a better understanding of the stress associated with peace support operations [e.g., 15; 16; 17; 18; 19; 20]. The purpose of the present paper is to continue these efforts by providing a conceptual framework of adaptation to peacekeeping that we term the Peace Support Operations Adaptation Model (PSOAM).

The Peace Support Operations Adaptation Model (PSOAM) - overview

The overall aim of the Peace Support Operations Adaptation Model (PSOAM), depicted in Figure 1, is to provide a conceptual framework that will help to identify the multiple demands and rewards associated with peace support operations and their potential effect on military personnel. Recent empirical work has acknowledged that stressors may vary across different operational phases of a peacekeeping mission [21; 17; 22; 23; 18; 24; 25]. Yet, most theoretical models of deployment stress explore adaptation in the deployment and the post-deployment phases of a peace support operation [e.g., 26; 4]. One of the goals of the PSOAM is to address this gap by discussing adaptation across the entire deployment cycle, beginning during predeployment, and continuing through the deployment, and post-deployment phases. A second goal of the PSOAM is to include individual, group, and organizational level factors at each phase of a peace support operation and discuss their impact on an individual's adaptation. We include as measures of adaptation a wide range of psychological and social outcomes that have been used in previous research.

As a starting point for the PSOAM, we rely on social cognitive theory which has dominated much of social psychological research for the past several decades [27]. Social cognitive theory assumes that people are capable of self-reflection and self-regulation and that they actively shape their environments rather than simply passively react to them. The theory does

not diminish the impact that stressful events have on people. Rather, it acknowledges the important interaction of experiential forces with the physiological, cognitive, emotional, and behavioural responses of individuals.

Social cognitive theory has played a significant role in research across a number of areas, including work on stress, coping, and adaptation. For example, Lazarus & Folkman's transactional model of coping [28] suggests that it is people's appraisals of a stressor, rather than the stressor itself, that will chiefly determine the magnitude of their stress reaction and their coping efforts. Appraisals include people's assessment of the stressor itself, as well as an assessment of their resources or capacity to cope. Lazarus and Folkman [28] label the former primary appraisals and posit that people assess events as threatening, harmful, or as a loss or challenge. People also make secondary appraisals to judge the adequacy of their resources to cope, manage, or overcome the stressor [28]. Finally, the model conceives of coping as dynamic, flexible, effortful, and responsive to personal preferences, resources and situational demands.

Taylor's theory of cognitive adaptation [29] can also be drawn upon to study issues of coping among military personnel, although it was largely developed on samples of people adapting to a variety of life-threatening events ranging from cancer to accidents and paralysis. Taylor asserts that three main cognitive processes guide successful adjustment to stressful events. The first is the ability to derive meaning from the experience. The second process involves regaining a sense of mastery over the event and over life in general. The third process is the restoration of self-esteem. Although these are described as separate processes, they are by no means considered to be independent of each other. For instance, developing an understanding of the meaning of an event can aid in re-establishing a sense of mastery and this, in turn, often raises self-esteem.

Lazarus and Folkman's model primarily elucidates the coping process, whereas Taylor's model concentrates upon the outcome of that process for people's well-being and the ways that they integrate stressful experiences into the larger framework of their lives. Both perspectives are extremely useful for understanding the adaptation of military personnel to peace support operations. In addition however, we complement and extend this perspective by incorporating work from the personality literature that treats individual differences as potential coping resources [30]. Specifically, dispositional factors can play an important role in the appraisals, coping efforts, and resolution of stress in people's lives.

Three further points should be mentioned at the outset. First, although we have tried to group variables into dimensions that make intuitive sense, the inclusion of particular variables into personal, interpersonal, or organizational levels is somewhat arbitrary. For instance, the time between an individual's deployments (OPTEMPO) could be considered a demographic factor or an organizational variable, as it is largely based on high-level policy decisions. Similarly, an individual's military occupation is often considered a demographic factor. Yet, the choice of which occupations are sent on a particular operation is an organizational one. Moreover, variables at one level can influence other variables within that level or across levels. For instance, experiencing Post-Traumatic Stress Disorder (PTSD) clearly has personal, interpersonal and organizational-level consequences.

Second, our selection of variables is not intended to be exhaustive. Instead, we have tried to select a range of variables discussed in previous studies, both from military research and other work to illustrate how the model can provide a framework for testing the impact that peace support operations have on individuals and the factors that relate to adaptation among peacekeepers. Although generic enough to be applicable to any nation's armed forces, the PSOAM's formulation draws substantially on the experiences of Canadian peacekeepers [3; 1; 4; 5; 14; 31; 32].

Third, as indicated in Figure 1, the model also includes a series of arrows. Note that these arrows do not portray statistical relationships or specific hypotheses per se. Rather, the arrows included in Figure 1 underscore the conceptual links that are presumed to underlie the psychological processes discussed in the model. They are also intended to emphasize the longitudinal nature of the PSOAM.

To foreshadow, this report is divided into three major sections, one devoted to each deployment phase and following the structure of the model itself. For each phase, we discuss personal, interpersonal, and organizational-level variables. Moreover, we discuss the relationship of variables with one another, and the ways that they may relate to subsequent phases of deployment.

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Predeployment: The precursors of adaptation

The predeployment phase covers a variety of factors that may affect coping and adaptation to the stresses encountered on a peace support mission. As mentioned, they include individual, social, and organizational factors. Predeployment individual-level factors include demographics, people's expectations around their mission and their ability to cope effectively with it, and dispositional factors. Also important to examine are interpersonal factors or the social context within which peacekeeping takes place, including perceptions of support from family, friends and the public. Organizational factors include Canadian government, Department of National Defence, UN and NATO policies regarding mission-type, rules of engagement, equipment and logistics restrictions and limitations. Organizational factors may also include what is sometimes called "vertical cohesion" or leadership and "horizontal cohesion" or esprit de corps [6], as well as the amount and type of mission specific peace support training people receive.

Demographic variables

Demographic factors include the age, gender, occupation and rank of the individual, number of previous deployments, and time between deployments. Also relevant is whether the individual is a member of the reserves or regular forces, has volunteered or was tasked for their mission, and whether the individual serves as a member of a formed unit or as an augmentee. Research has begun to document the effects of various demographic variables on the adaptation of peacekeepers [33; 34]. Adler, et al., [15] reported that lower ranking U.S. army personnel were more likely to report PTSD symptoms as compared to their higher-ranking counterparts. Gender, too, has been related to stress outcomes in military samples [35]. Our own analyses suggest that both age and whether an individual has volunteered or was tasked for a mission significantly affects predeployment levels of motivation for an upcoming deployment [31]. In addition, there is some evidence that augmentees to peace support missions face greater stresses associated with a lack of administrative and social support than members of formed units [1; 3; 14].

Some military occupations are more likely to witness traumatic events than other occupations and thus be at greater personal risk. These occupations include frontline combat units, combat engineers, and medical personnel. Moreover, it is often these same trades that are tasked repeatedly for peace support operations [1]. This may account for lower levels of predeployment motivation, poorer deployment outcomes, and more burnout among these groups [15; 6; 36; 37; 31; 38; 39].

When examining the relation of demographics to overall adaptation, it may also be helpful to target individuals who may be more vulnerable to stress. That is, in addition to looking at specific occupation types as discussed above, individuals who represent a minority in a particular demographic category may be more likely to experience social isolation and higher stress. For example, being an augmentee to an formed unit, female in a predominantly male unit, and a Canadian assigned to a multinational unit of another culture, are all examples of

circumstances in which demographic variables may single out individuals and affect the quality of their peacekeeping experience.

Predispositions

Predispositions refer to relatively enduring patterns of reactions, beliefs, and attitudes. Included in this category are feelings of mastery [40], hardiness [41; 42; 43; 44], locus of control [46; 47], and dispositional optimism, [47; 48; 49]. These predispositions are thought to act as a filter through which experiences are comprehended, appraised, and acted upon [50]. In this way, personality predispositions can affect an individual's resiliency in the face of stressful life events [41; 49].

For instance, *psychological hardiness* is thought of as a individual difference that can moderate the effects of stressful life events. It is a characteristic that is presumably manifest early in life, and is relatively stable over time [51]. Indeed research has demonstrated that [26; 41; 42; 43; 44] especially the commitment and control subcomponents of hardiness, is related to improved psychological resiliency [52] and to better psychological and physical health outcomes in a variety of military environments [26; 53; 52; 54; 18]. Indeed, Bartone [55] has found evidence of the elusive stress-buffering effects of hardiness in his study of American military personnel deployed to Bosnia. Although there were no main effects of hardiness per se, soldiers who scored higher hardiness scores were less likely to report PTSD symptoms when they had experienced both chronic stressors and severe traumatic events during the deployment. In a separate analysis Bartone demonstrated that although predeployment stressful events were related to subsequent deployment problems, this effect was again moderated by hardiness. Thus, is in both cases hardy individuals were better able to tolerate the demands of stressful events.

Dispositional optimism [47] refers to a generalized tendency to expect positive future outcomes. Optimism is thought to provide individual's with a positive mood and the confidence to persist and to strive toward desired goals despite encountering obstacles [56]. The literature in this area suggests that optimists make easier life transitions [57] and respond more positively to stressful life events [49] and to failure experiences [58].

Other literature suggests that a person's *internal locus of control* [59] or their belief that their actions can influence important aspects of their life is related to better psychological and physiological health [60; 61]. All of the cognitive processes discussed thus far may be related to this basic human motivation. A sense of control is also likely to interact with other factors to affect people's adaptation.

Another potentially important disposition variable is the *belief in a just world* (BJW) [62; 63]. Individuals high in BJW believe that the world is a place where good people are rewarded and bad people are punished [63]. Lerner and Montada [64] characterize BJW as a belief that can motivate people to act in ways that will maintain their view that people get what they deserve in the long run. Lerner & Montada highlight that, for some people, BJW seems to be a necessary belief to provide meaning to the events around them and to allow them to predict future events. In general, a strong belief in a just world is associated with less depression, less stress, and greater life satisfaction [65]. There is also some evidence that high BJW is

associated with a greater acceptance and less dissatisfaction with negative experiences (Hafer & Olson, cited in [64]).

On a more negative note, research suggests that a belief in a just world can influence how people interpret the misfortune of others. Believers in a just world have been found to be more likely to admire fortunate people and to derogate victims, relative to nonbelievers [63]. Specifically, early research in the area showed that university students who were "innocent observers" to the unwarranted suffering of a blameless victim were initially distressed by the victim's suffering. However as the session continued and as respondents found that they were unable to intervene, the emotional reactions of the student observers changed to denigrating the victim [62; 64]. Confronting an innocent victim then, may pose a threat to people's fundamental belief that the world is a just place. People will develop ways of defending this belief that may be positive, like efforts to eliminate injustice, or negative, like denigrating victims who they are unable to help. The implications of these mostly experimental studies with college students have yet to be extended to military research.

We also investigate a class of dispositional variables that are rooted in individuals' preferred decision-making styles and their ability to tolerate ambiguity in the situations they experience. For example, in a peace support context, an inability to deal with ambiguity may be manifested in difficulties appreciating cultural differences [66; 67]. People can also have difficulty with military rules of engagement that, by their nature, are not explicitly laid out to deal with every situation, but instead require people to weigh a variety of different factors before making a decision [68]. For instance, an individual possessing a high chronic *Personal Need for Structure* (PNS) [68] prefers structure and clarity in most situations. Research indicates that individuals high in PNS are more likely to use stereotypes when dealing with other people, to make decisions based on initial information only, and to discount subsequently introduced contradictory information [69; 70; 71; 72; 73; 74]. Thus, these individuals may find that the ambiguity and "grey areas" often associated with peace support operations are particularly frustrating and distressing. Moreover, their interactions with people from other cultures may be based largely on stereotypes.

A second cognitive style of potential relevance is a *Need for Cognition* (NFC) [75; 76; 77]. NFC refers to individual differences in the tendency to seek out, engage in, and enjoy cognitively complex and demanding tasks. Individuals "high in need for cognition are characterized by active, exploring minds" [77, p. 199]. Those high in NFC may spontaneously seek out information as they work to bring structure and meaning to the situations they encounter [78]. High NFC has been associated with perceptions of self as an effective problem solver [79], with increased levels of curiosity [80] and with greater complexity in explanations of behavior [81]. Individuals high in NFC also tend to be persuaded by rational arguments rather than collateral or surface aspects of the issue [82; 83]. Taken together, these studies suggest that people high in NFC typically endeavor to work through, understand and bring a sense of coherence to issues [84].

As is the case with research on beliefs in a just world, much of the research on decision-making styles has been obtained in controlled laboratory experiments with university students. These results need to be replicated with military samples in peace support contexts. Moreover, applying these predispositions to a peacekeeping context is vital in light of the ambiguous situations faced by peacekeepers and the senseless violence that often confronts

them. What are the effects of such events, especially for individuals who typically believe that they have a high degree of control over their lives or have a high need for structure? Also, to what extent does dispositional hardiness, and optimism function to ameliorate the confusing effects of situations that are perceived of by peacekeepers as senseless?

Expectations

Since the 1980's much of the coping literature has sought to understand differences in people's interpretation of, sensitivity to, and reaction to events, as well as the impact that these appraisals have on people's well-being. People's appraisals and expectations differ from research on predispositions in that the former are believed to be dynamic and situation-specific. That is, rather than reflect stable and relatively enduring ways of dealing with experiences, appraisals are expected to vary in light of changes in the demands of different situations.

Recall, Lazarus and Folkman [28] suggest that people appraise events in terms of whether the event acts as a potential threat, harm, loss, or challenge, and in terms of whether they have the resources to cope with it. They suggest that it is these appraisals rather than the stressor itself that will be the chief determinant of the magnitude of people's stress reaction and that will determine their coping efforts. Research has provided consistent support for this notion. In summarizing both the relevant laboratory and field research, Catanzaro & Mearns [85] concluded that expectations were critical factors in determining "coping responses and adaptation across a wide range of the life span and in a variety of life contexts" (p. 75).

Bandura, too, noted the importance of psychological appraisals, especially in determining behaviour change [86]. He identified two factors: 1) perceptions of situation-specific self-efficacy or people's beliefs that they have the capacity to mobilize the necessary resources and actions to exercise control over their behaviour; and 2) outcome expectations or people's assessments that a given behaviour will achieve a desired outcome. To date, research on self-efficacy has been used to study a range of issues such as phobias, addictions, depression, exercise, career choice, and education [87]. We expect that both expectancies will influence peacekeeper's behaviours throughout each phase of their deployment.

In other research, people who held positive expectations about an upcoming event were less likely to use maladaptive coping responses such as self-denigration, whereas people who held negative expectations were more likely to experience decreases in positive affect and were less likely to use adaptive growth-oriented coping strategies to deal with an event [88]. These individuals were also more likely to engage in maladaptive behaviors (e.g., excessive drinking) in order to cope with the event [89].

However, there may be limits to the positivity-psychological adjustment relation. Interestingly, it is sometimes those individuals with the most positive (i.e., idealized) expectations that experience difficulties in adjustment and who display performance/behaviors problems when the "realities" of the situation become evident [90; 91; 92]. Thus, the discrepancy between pre-event expectations and the subsequent outcome of an event can be important in predicting psychological distress [90]. At the same time, Taylor [29] provides intriguing data concerning the consequences of the disconfirmation of

expectancies, like control expectations, to support her hypothesis that that when peoples' beliefs are not confirmed, they simply change their beliefs, at least in some cases. For example, in a study with cancer patients, she writes:

> Disconfirmation of efforts at control did not produce the emotional upset or inactivity that one might predict .... Rather, there are many things that can potentially be controlled, and if one's need to control a situation is great, one will control what one can and give up attempting to control what one cannot [29, p. 1170, cf. Rothbaum et al., 1982)

It is exactly this flexibility of belief that is one of the hallmarks of successful adaptation for Taylor and others operating within the social cognitive framework. Again people are viewed as reflective, adaptable, self-protective, and able to change behaviours in the face of setbacks.

Applying this work to peace support operations suggests that individuals who hold largely positive expectations concerning their upcoming deployment will experience better adjustment. However, these positive expectations must include a realistic evaluation of the challenges and hardships associated with most peacekeeping deployments. Moreover, expectations must be flexible enough to be revised in the light of disconfirming evidence. Idealized expectations about the deployment, such as the amount of benefit one can confer on people living in a war-torn country, may leave some peacekeepers with greater difficulty adjusting.

Social/Interpersonal context

There is a wealth of literature suggesting that social support is important in ameliorating the effects of both physical health and psychological stress (e.g., [93; 94; 95; 96; 28; 88]. Research from within a military context also underscores the importance of social support variables in the coping of combat veterans [97; 98; 54; 46]. As a result, we suspect that peace support operations veterans who report less support from within their predeployment social network will be more vulnerable to the effects of stress across the deployment cycle. This hypothesis is consistent with work by Bartone et al., [55] that found that two major predeployment stressors reported by military personnel were social in nature: getting to know peers and leaders, and concerns regarding support for family.

Most research on support has looked at *informal support* or the support provided by family and friends, and *formal support* such as support offered in the form of services from employers or the health system. Much less work has examined the effects of perceived media and public support upon adaptation. Nonetheless, focus group participants in our own research were keenly aware that their portrayal in the Canadian media has focused upon negative episodes, virtually ignoring positive contributions. They believed that the negative portrayal of military personnel in the media can have an impact on the morale of Canadian soldiers [1; 14]. Hence, we include the impact of media coverage and public perceptions upon adaptation processes.

Organizational/Structural elements

Organizational structures refer to those elements controlled primarily by the military organization and command structure. Examples include policy decisions around mission type, number of deployments across the course of a career, deployment length and time between deployments. Perceptions of leadership and cohesion, amount and quality of preparation and training for peace support operations and whether personnel are deployed as part of a multinational force also fall into this category.

There is some research that examines the impact of organizational-level decisions upon the morale and adjustment of individual soldiers [99; 100; 3; 1; 101; 103]. For instance, one study looked at the effect that deployment load (defined as number of deployments divided by number of years in the service) had upon adjustment [6]. Soldiers who served on multiple operations, and especially those who had been in the service for less time, reported higher levels of stress, possibly due to the need to adjust to changing lifestyles, environments, and climates [6; 102; 104; see also 1; 105]. In general, the number of deployments has been increasing, with some peace support personnel deploying every two or three years for a period typically lasting six months [4]. As a result, variables like the number of deployments, the duration of deployments, and the time between deployments are expected to be critical to the adaptation of military personnel.

With respect to leadership, soldiers' perceptions of positive practices on the part of their superiors (e.g., listening to subordinates problems, maintaining high levels of professionalism) were generally associated with higher morale and cohesion at the unit level, and higher professional morale and military ethos [99; 3]. Low cohesion can exist among both fellow soldiers and with unit leadership [15; 103] and has been shown to have a negative effect on overall job performance and during periods of stress [106; 101]. The Canadian Forces Directorate of Human Resource Research and Evaluation (DHRRE) has developed the Unit Climate Profile (UCP), a multidimensional survey instrument that measures perceptions directly relevant to operational effectiveness like morale, cohesion within the unit, leadership and combat readiness. They administered the UCP to a sample of peacekeepers 48 hours prior to their deployment overseas. Results indicated that UCP measures of morale and cohesion, professionalism, and confidence in leadership were quite positive [3]. However, to date no research has prospectively investigated the impact of predeployment perceptions of leadership upon subsequent adaptation.

Enabling/Impedance factors

According to the PSOAM, predeployment demographics, expectations, predispositions, social/interpersonal factors, and organizational structures will influence motivation levels, deployment goals, assessments of preparedness and personal risk, and behaviours directed at coping with the upcoming peace support operation.

There has been very little work investigating deployment goals. However, we found that CF personnel undertook peace support missions for a variety of reasons. These reasons included fulfilling humanitarian goals, gaining a unique and challenging work experience, for multicultural contact, for comradeship, out of a sense of professional duty and pride, for

monetary reasons and because they had no choice [1;14]. As well, many respondents appeared to have more than one reason for undertaking their upcoming mission.

What is less clear is whether and how the nature of people's goals will affect their adaptation to peace support operations. This opens up a variety of interesting research avenues. For example, it may be that military personnel with more intrinsic or humanitarian deployment goals will report greater personal satisfaction and greater organizational commitment post-deployment. On the other hand, individuals with extrinsic or instrumental deployment goals may be less personally invested in the positive outcomes of a mission and thus might be better protected from the psychological toll that peace support operations can take on an individual.

Similar to the potential effects of idealized expectations, we investigate the implications of deployment goals that are at odds with one another or when there are discrepancies between anticipated and attainable goals [25]. Past research has found that soldiers can possess conflicting personal versus political views of the mission or conflict based upon their warrior training versus the neutral peacekeeping role they must assume [107; 108]. We expect that the greatest diversity in goals and the greatest discrepancies in goals will be found among novice peacekeepers at the pre-deployment phase. These individuals have little personal experience upon which to draw and face the most uncertainty. With greater experience and time spent actually on deployment, many individuals are likely to re-examine and modify their goals, keeping only those most likely to be attainable. Maintaining incompatible goals or persistence in reaching unattainable goals is likely to result in poorer adaptation.

Perceptions of risk have been researched extensively in the context of health psychology [e.g., 109; 110; 111; 112; 113]. The literature finds that people generally underestimate the likelihood that they will experience stressful events in their lives, and that these risk assessments are tied to concomitant psychological, physiological, and environmental factors [110;112; 113]. Importantly, people tend to be unrealistically optimistic about risks over which they perceive they have some degree of control. For instance, Weinstein [113] asked undergraduates to rate their perceptions of their susceptibility to a variety of health and safety outcomes and provide reasons for their answers. Overall, students indicated that they believed they had a fair degree of control over psychological and a number of physical health outcomes and that, as a result, they were at lower risk for them than outcomes over which they had less control.

These results suggest at least two hypotheses concerning perceptions of deployment risk. First, we expect military personnel to believe that they are less at risk on the deployment than are most of their peers. Second, we expect that individuals will underestimate their risk of encountering negative events and outcomes to the extent that they believe they have control over relevant mitigating factors. To date, there has been no research investigating the nature of perceived risks in peace support operations, nor have there been studies establishing the nature of the relation between perceptions of risk and subsequent adaptation.

Organizational commitment, or degree of investment in one's job, role or occupation, is also viewed as an enabling/impedance factor in the model. Among military personnel, perceptions of low organizational support, poor work cohesion and a greater number of work hassles has been associated with less organizational commitment [35]. However, in the past, organizational commitment has been treated as an outcome variable that is affected by

perceived support, work cohesion and work hassles. The present research takes a different perspective from this prior work, suggesting that organizational commitment may also be *determinant* of adaptation among peace support operation personnel.

A final enabling factor we include in the model is people's pre-deployment anticipatory coping behaviours. By *anticipatory coping,* we mean an individual's deliberate, planful efforts to circumvent or minimize stress before it happens, including the initiating of behaviors that would overcome, avoid, or minimize problems [114]. To date, there is relatively little research on anticipatory coping although at least one study suggests that it is relatively prevalent [114]. Other research finds that, when faced with a chronic stressor, many individuals adopt a vigilant stance in order to circumvent problems [115; 116]. In the context of peace support operations, soldiers have reported timing their mission so as to make their absence easier on their families, another instance of anticipatory coping [14]. However, the opportunities for and the beneficial effects of anticipatory coping have yet to be empirically examined.

Summary

As Figure 1 indicates, we expect that a wide range of variables, including demographics, predispositions, expectations, the social context, and organizational elements will act as enablers that can facilitating peacekeepers' adaptation, or as impedance factors, making peacekeepers more vulnerable to the effects of stress on peace support operations. We turn now to factors that may influence the adaptation of military personnel during deployment.

Employment factors and adaptation

Clearly, the experiences encountered by peacekeepers while on deployment play an important role in adaptation. These include a broad spectrum of deployment events, as well as interpersonal and organizational-level variables. As discussed, we believe that adaptation to these experiences will be influenced by the factors described in the predeployment phase. In addition, adaptation to peace support operations necessitates an in-depth examination of the specific contextual features of the employment experiences, of peacekeepers' perceptions, appraisals, and coping efforts, and of the interpersonal and organizational features within which peacekeeping takes place.

Employment experiences

Many military personnel will encounter at least one significant, traumatic experience during the course of their peace support operation. As mentioned, peacekeepers have witnessed the injury or death of military personnel, the large-scale massacre of civilians, handled wounded or dead bodies and have themselves been the targets of direct fire [4; 10; 11; 12; 13; 117]. Much of the research on peacekeeping deals with the effects of these traumatic events on military personnel. As one peacekeeper noted: "Nobody ever trained you to sit there in a compound and watch women and children being shot like animals throughout the second floor of a house. ... [pause] ... that's got to be the worst thing that a human being can do. There you are, trained, you've got weapons in your hand, yet there's absolutely nothing you can do" [14, p. 1].

In addition to these events, recent research indicates that peacekeepers also contend with a host of other less traumatic experiences that fall into the category of chronic stressors and daily hassles [4; 23]. They can include restrictive rules of engagement, role conflict, restricted movement and curfews, crowded or primitive living conditions, extreme weather, foreign customs and even long periods of inactivity and boredom [118; 4; 119; 14]. Moreover, peacekeepers often juggle long-distance family and financial concerns and commitments in addition to their peacekeeping duties [17; 2; 1; 23; 4; 120]. Yet, despite documenting these chronic experiences, there has been no systematic research concerning their impact on the adaptation of peace support personnel.

The type of experience is not the only aspect of employment experiences that need to be studied. It is also important to examine how acute and chronic experiences differ in terms of dimensions such as frequency, duration, intensity, predictability and controllability [121; 1; 23; 107; 5]. As in other research, we expect that negative experiences that are frequent, of long duration, unpredictable and uncontrollable will result in poorer adaptation among military personnel.

Individual perceptions, appraisals, and coping

Coping is most often defined as a "person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or

exceeding the person's resources (Lazarus & Folkman, 1984b)" [50, p. 993]. Notice several things about this definition. The first is that it includes all of people's efforts to respond to difficulties and does not confound them with the outcome of how well or badly they work. This then, allows us to compare coping efforts that may be associated with poorer adaptation with those associated with better adaptation. Coping is also described as effortful to distinguish it from more automatic and physiological responses to stress [28]. The definition also underscores that people are responsive and adaptive and that they can change their coping strategies, a point discussed earlier in the paper. Finally, people's appraisals of an experience are critical in understanding their coping efforts. These evaluations are especially important in chronic stress contexts. The reason for this is that the long life of a chronic stressor means that people have ample opportunity to monitor, assess, and re-assess the stressor and their coping efforts to deal with it [122; 123].

The literature on coping is far too large to adequately review here. For several excellent review papers, the reader is referred to a recent issue of the American Psychologist (American Psychologist, 2000). Drawing upon this literature, we expect that peacekeepers' adaptation will be determined not only by the types of experiences they encounter, but also by their ongoing appraisals of the experiences, their coping efforts, and their appraisals of the success of those efforts [50; 123; 28]. In fact, studies in a military context have found that combat-related exposure was not as important to subsequent adaptation as were the positive meanings that veterans ascribed to their experiences [121; 124]. In other work, Bartone and colleagues 18] have noted that perceptions of helplessness and powerlessness are particularly common among peacekeepers. These appraisals of a lack of control over experiences have been shown in other research to be associated with poor psychological well-being [28; 123; 125; 126; 127].

Interpersonal and organizational elements

Organizational elements associated with the deployment will also have an impact on adaptation. These elements include interpersonal relationships with colleagues and citizens within the country they are serving, perceptions of positive and negative leadership behaviors and the chain of command, group cohesion, role ambiguity, perceived adequacy of predeployment training, and ambiguous rules of engagement. In general, we believe that interpersonal and organizational factors will have an impact on adaptation in two ways.

First, they can serve as acute or chronic stressors in and of themselves and directly contribute to people's adaptation. For example, in one study augmentees reported lower morale scores than members of the military who were part of a formed unit [3]. The authors speculate that augmentees may have less time to develop a sense of cohesion with their unit, effecting on their morale. Hence, being an augmentee may be stressful for many individuals and impact their adaptation. Second, interpersonal and organizational factors may moderate the relationship between stressful experiences and their impact on adaptation. For example, positive leadership practices may help to intervene between a stressful experience and people's subsequent adaptation. Good leadership may provide military personnel with help resolving problems and a sense of support. As yet there is no data examining the moderating role of organizational variables. However, research utilizing the UCP found that positive leadership practices were associated with higher morale and cohesion at the unit level, and

higher general professional morale and military ethos during the deployment phase of an operation [99; 3]

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Post-Deployment phase and adaptational outcomes

The third phase of the PSOAM examines post-deployment factors that potentially influence adaptation. These variables again fall into three classes: personal, interpersonal, and organizational variables. We then look at both positive and negative outcomes that have been used to assess adaptation in other research [121; 5; 128].

Personal variables

Although the military psychology literature has focused on personal-level outcomes and symptoms, there is surprisingly little research on the specific personal factors influencing peacekeepers' post-deployment adaptation. However, similar to other phases, we expect that people's postdeployment appraisals and behaviours will be related to their adaptation. In our focus groups, some military personnel talked about the postdeployment effects of serving on peace support missions. "You take a guy ... stick him in a situation and have a constant barrage for six months and haul him out and tell me that he's the same guy, -- its not going to happen."

Apart from witnessing ethnic cleansing and significant human suffering, simply viewing widespread infrastructure destruction also had a significant impact for at least one of our focus group respondents: "You drive through the main street in Bosnia, everything's blown to hell. How does that affect your brain? I mean obviously we come back, we adjust to normal life... ." Several of our discussants also indicated the role of military culture on the likelihood of discussing the personal impact of their deployment experiences: " You know, the general military attitude is, like you know, stiff upper lip, put up with it, go through it, do it, get it done, get back. You know, if you see something terrible you never talk about it. If you have a bad time you never talk about it."

Beyond the effects of specific experiences, several individuals reported a sense of separateness or of feeling disconnected upon their return from peace support operations [14]. These feelings can spring from a sense that one is no longer contributing to a significant military goal, or from returning to a situation in which no one else had shared the deployment experience. Individuals who had never been on a peace support operation were sometimes surprised to learn that there existed a time of reintegration for returning peacekeepers' and felt that they were unlikely to experience similar issues [1]. However, post-deployment psychological isolation has been found to have a profound and devastating effect on returning Vietnam veterans [129]. Indeed, these feelings of loneliness and of being disconnected were the strongest predictor of PTSD 10 years after the war's conclusion. Results such as these led Fontana and Rosenheck [130] to conclude that "homecoming is a critical event in determining whether acute stress reactions are either diminished to subclinical intensity or are preserved undiminished to become recognized at some later point as PTSD" (p, 683).

Interpersonal variables

There has been considerably more research on interpersonal variables that contribute to adaptation during the post-deployment phase than individual variables. As with the deployment phase, we expect that post-deployment interpersonal issues can directly affect adaptation or can indirectly affect adaptation by moderating or buffering the impact of other variables. For example, some peacekeepers talk of having to "renegotiate" their role in the family after being away. Their spouses and children have a "routine" or "system" that they must learn [131]. Co-workers can also be resentful of returning peacekeepers. Job responsibilities often need to be re-allocated upon a peacekeeper's return and may result in tension in the workplace. This tension at home and/or at work can directly contribute to peacekeepers' adaptation. For example, Adler and colleagues found that post-deployment problems with co-workers persisted for some U.S. soldiers almost a year after their deployment, and that these problems were positively correlated with post-deployment stress symptomology [15]. Similarly, lack of social support or instances of negative social interactions were a significant predictor of PTSD even after the effects of combat exposure, earlier trauma, and present stressful life events were taken into account [130; 124]. The awareness and responses of commanding officers to reintegration problems may also affect peacekeepers' postdeployment adaptation.

Organizational variables

Post-deployment organizational variables may also contribute to a peacekeeper's adaptation. For example, there may be differences between the ease with which augmentees, reservists and regular force personnel can access organizational support services. Moreover, reserve forces may face uncertain job prospects upon their return from deployment. Augmentees and reserve forces also report that formal debriefings upon return home are sometimes overlooked or take place months after their return. To date, there has not been much attention paid to organizational variables and their relationship to adaptation. However, to some degree this may be changing. McCann and Pigeau note that "Cutbacks, personnel reductions, equipment rust-out, poor media relations, inadequate leadership -- all can lead to low morale, attrition, poor motivation, extended sick leave, and so on" [132]. Not surprisingly, the level of operational tempo, or the number of peace support operations military personnel are involved in across a specified period of time, also plays a role in their adaptation. Research conducted in the United States found that when the number of deployments was high, participation in peace support operations was associated with the erosion of morale and greater intentions to leave the military [104].

Adaptational outcomes

Thus far we have focused on potential factors that may relate to the adaptation of military personnel to peace support operations. In this last section, we will summarize some of the most common outcomes used to assess adaptation in research with the military.

Personal outcomes

Personal outcomes include positive or negative consequences for the individual as a result of their deployment experience. Potential positive personal outcomes include a sense of professional and personal development, increased self-discipline, resilience, self-esteem, belief in the value of the deployment, a deeper valuing of life, development of a clearer direction and sense of purpose in life, a deeper appreciation of peace, reassessments of basic values in life, contributing to humanitarian causes and cross-cultural contact [121; 1; 34; 5; 14; 128]. For example, Aldwin and colleagues found that individuals who were able to recount positive effects of their military service, such as learning to cope with adversity, gaining self-discipline, and developing a broader perspective, showed a decreased relation between combat stress and PTSD [121]. Thus, although lifelong negative consequences of combat were observed, perceiving benefits from their experience mitigated the effect.

The negative personal consequences of military operations have been the major focus of research, particularly Posttraumatic Stress Disorder (PTSD) [121; 124; 54; 18; 25], and its more recent manifestations of Gulf War Syndrome [133; 134]. There is no doubt that clinical levels of PTSD are associated with severe psychological and lifestyle problems. Relative to veterans without PTSD, American Vietnam veterans diagnosed with PTSD showed high rates of chronic debilitating depression, bipolar disorder, panic disorder, obsessive-compulsive disorder and social phobia [135]. Individuals with PTSD also reported significantly higher numbers of negative life events occurring after their diagnosis [46; see also 136]. As a result, Solomon and Mikulincer hypothesized a vicious cycle in which "the presence of a mental disorder leads to stressful events, deterioration of social networks and maladaptive cognitions, which in turn, exacerbate the disorder [46, p. 251]".

Other problems in reintegration and postdeployment adjustment are wide ranging and can have considerable long-term consequences for returning soldiers. For example, Bartone, et al. [55] contend that feelings of helplessness and powerlessness that can come with peacekeeping operations may be especially damaging in the long-term. One large scale study of psychiatric symptomology and peacekeeping service [25] found that over a third of a sample of 3,461 American peacekeepers suffered from clinically significant psychiatric symptoms including elevated levels of hostility, psychoticism, depression and paranoid ideation. One of the few studies of peace support operations to cover all phases of a deployment revealed that, among a sample of New Zealand peacekeepers, feelings of well-being decreased and psychological distress increased soon after deployment ended. Moreover, these patterns continued to persist six months after the deployment had ended [24].

Other intrapersonal and lifestyle effects of combat include increased somatic complaints, antisocial behavior, hostility, increases in alcohol and drug dependence, increased risky behaviors (e.g., dangerous driving, driving under the influence) [25], suicides and accidents (Centers for Disease Control, 1987, cited in [121]). These maladaptive outcomes have previously been associated with war experiences. Yet, modern peace support service is now thought to involve similarly intense stressors and may result in similar outcomes of adaptation [15; 137; 119; 135]. These ideas are now being acknowledged and tested in contemporary models of soldier readiness [e.g., 138; 139].

Social outcomes

Social outcomes encompass a wide variety of relationships including immediate and extended family, friends, co-workers who deployed with individual, co-workers who did not deploy with individual, other members of the military, and members of the Canadian public. Research suggests that each of these relationships constitute links in soldiers' social networks that must be reestablished during the post-deployment phase [1; 14]. In this regard, outcomes of particular interest include feelings of alienation and loneliness versus greater closeness and connection. Studying changes in the amount of contact people have with friends and family might also signal difficulties in adapting to peace support operations. Individuals having difficulty adjusting would be expected to withdraw from contact with others.

Organizational outcomes

Investigations of organizational-level outcomes have been less prevalent in the military literature [see 3; 102; and 104 for exceptions], although decreases in individual psychological adaptation are almost certainly thought to be related to decreases in unit operational effectiveness and readiness [e.g., 139; 7; MacDonough and Blankinship, as cited in 140; 8; 141].

Recently, however, there has been recognition of organizational-level costs for militaries: in terms of low morale, poor motivation, extended sick leave, time off and job turnover [132]. McCann and Pigeau note that "militaries need to know how they, as organizations, are responding to the pressures of multiple deployments" [132, p. 403]. Murphy and Farley [3] conducted postdeployment assessments with Canadian Forces personnel 7-8 months after returning to Canada. Their results showed increased negative attitudes concerning morale, declines in confidence in leadership, and decreased ratings of unit cohesiveness relative to the in-theater levels of these same measures (see Eyres, [100], for similar findings).

Summary and conclusions

This report presents the Peace Support Operations Adaptation Model. The model integrates theory and research on stress, coping and adaptation from social, clinical and military psychology. The model is intended to provide a conceptual framework through which to identify and understand the associations between the multiple demands and rewards associated with peace support operations and understand their effects upon the subsequent adaptation of military personnel.

The model details adaptation issues across the deployment cycle, beginning during predeployment, and continuing through the deployment and post-deployment phases. Moreover, the PSOAM integrates the individual, group, and organizational level factors assumed to operate at each of the deployment phases. The model is intended to complement and extend previous theoretical conceptualizations of deployment stress and examines the effects of both positive and negative experiences across each deployment phase.

We believe that the conceptual framework provided by the PSOAM will contribute to a greater understanding of adaptation processes in the context of peace support operations in at least three ways. First, much of the literature in the area of combat and deployment stress concentrates almost exclusively on the negative effects and debilitating consequences of military operations. Yet, some research has suggested that there are personal rewards and positive aspects associated with a variety of military service experiences, including peace support operations [121; 18; 128]. As a result, we incorporate a range of positive and negative factors in the model.

Second, most of the literature in the area has explored only one or two classes of variables that might affect adaptation at the deployment and post-deployment phases [e.g. 52; 142; although see 3; 54; and 4; for exceptions]. The PSOAM is one of the only conceptual models to address the impact of a wide range of predeployment factors upon peace support operations adaptation.

Third, the model was specifically constructed to facilitate longitudinal research in the area of deployment stress and coping. It elucidates a variety of factors assumed to operate at the predeployment phase, and indeed is one of the only models to do so. However, beyond this longitudinal perspective, the model also allows for the study of adaptation cross-sectionally to address questions within each deployment phase. As one example, research within the predeployment phase itself can examine the relation of demographic variables and stable personality characteristics to predeployment motivation and conflict levels, and to deployment goals. As well, a focus on predeployment can elucidate the role of organizational factors such as predeployment perceptions of leadership and relate it to predeployment motivation and organizational commitment. We have developed and are about to pretest such a predeployment questionnaire.

Bartone and colleagues wrote that "Understanding the psychological stressors of peacekeeping operations is essential to the development of effective programs to enhance soldier adaptation and prevent the ill effects of stress" [17, p. 587]. As mentioned in the

introduction of this paper, we have tried to focus on the precursors, correlates and consequences of successful psychological adaptation. We hope that this focus of our model will aid in the understanding advocated by Bartone et al., and enable us to enumerate particular modifications to training content and delivery that may avert later maladaptive responses. Indeed, one of the chief challenges for future research will be to determine the extent to which the cognitive, affective and behavioral strategies of psychological resilience can be modeled and presented in an effective training package. We also hope that the focus on precursors of successful adaptation, i.e., psychological resiliency, will aid in the specification of individual difference variables of relevance to personnel selection in instances where training cannot completely ameliorate the effects of negative events encountered on or associated with peace support operations.

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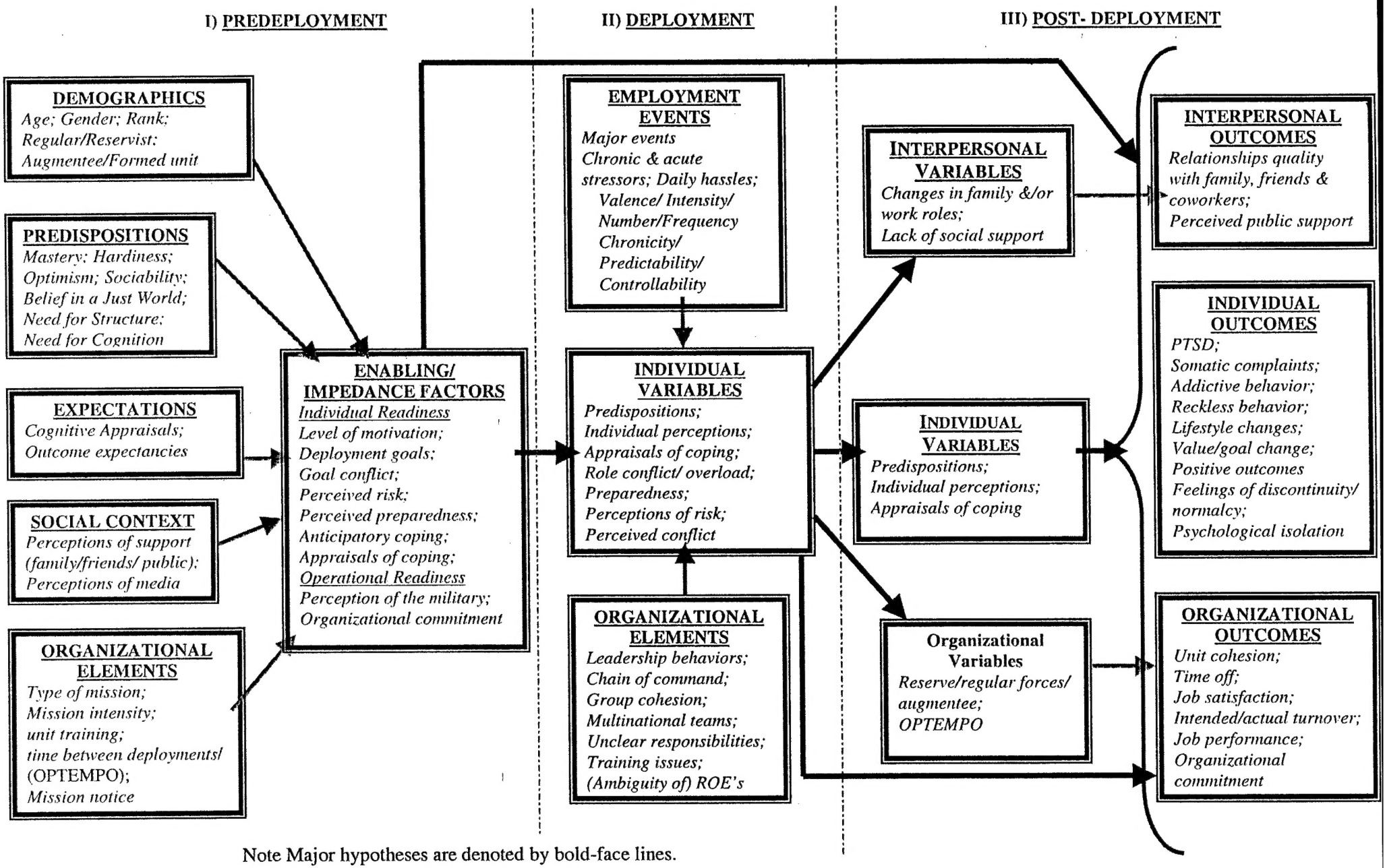

Note Major hypotheses are denoted by bold-face lines.

Figure 1: The Peacekeeping Adaptation Model

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14. ABSTRACT

(U) Canada has a long and distinguished history of peacekeeping service, yet research from within the Canadian Forces indicates that the psychological and interpersonal toll of these missions on CF personnel can be quite high [e.g., 1; 2; 3; 4; 5]. The Peace Support Operations Adaptation Model (PSOAM), introduced here, details the adaptation process beginning during predeployment, continuing through the deployment and post-deployment phases. The model adds to existing conceptual models of deployment stress by incorporating individual, group, and organizational level variables at each stage of the deployment cycle, factors assumed integral to short and long term adaptation. Of particular interest are the influence of predeployment factors upon individuals' coping efforts and resiliency. The effects of personality factors (e.g., hardiness, self-efficacy, mastery, dispositional optimism, internal locus of control) and predeployment expectations (e.g. deployment goals, beliefs concerning upcoming deployment) on predeployment motivational factors (e.g., level of motivation, perceptions of preparedness, perceptions of risk, level of intrapersonal conflict) are of specific concern. These predeployment factors, together with self-assessments of coping resources during deployment are assumed to directly affect the quality of adaptation and serve as the primary influences on individuals' resiliency to the stress associated with peace support operations. Our focus on the precursors of the adaptation process also allows us to contribute to efforts to recommend modifications to training content and delivery that may avert later maladaptive responses. Moreover, this focus allows for the specification of individual difference variables of relevance to personnel selection in instances where training cannot completely ameliorate the effects of negative deployment events.

15. KEYWORDS, DESCRIPTORS or IDENTIFIERS

(U) predeployment; operational stress; Canadian Forces personnel; PSOAM scale; personality factors; coping; peacekeeping